6. MITIGATION MONITORING PROGRAM

As the Lead Agency under the CEQA, the CSLC is required to adopt a program for reporting or monitoring regarding the implementation of mitigation measures for this Project, if it is approved, to ensure that the adopted mitigation measures are implemented as defined in this EIR/EIS. This Lead Agency responsibility originates in Public Resources Code §21081.6(a) (Findings), and the State CEQA Guidelines 14 CCR §15091(d) (Findings) and §15097 (Mitigation Monitoring or Reporting). The adopted mitigation measures and monitoring program would also be included as part of the NEPA ROD. This Mitigation Monitoring Program will also be used by the MBNMS to track implementation of required mitigation measures within the Sanctuary.

6.1 MONITORING AUTHORITY

The purpose of a Mitigation Monitoring Program (MMP) is to ensure that measures adopted to mitigate or avoid significant impacts are implemented and, once implemented, to evaluate their effectiveness. A MMP will be a working guide to facilitate not only the implementation of mitigation measures by the Project proponent, but also the monitoring, compliance, and reporting activities of the CSLC and MBNMS and any monitors they may designate.

The CSLC and MBNMS may delegate duties and responsibilities for monitoring to other environmental monitors or consultants as deemed necessary, and some monitoring responsibilities may be assumed by responsible agencies, such as affected jurisdictions and the California Department of Fish and Game (CDFG). The number of construction monitors assigned to the project will depend on the number of concurrent construction activities and their locations. The CSLC, MBNMS, or their designee(s), however, will ensure that each person delegated any duties or responsibilities is qualified to monitor compliance.

Any mitigation measure study or plan that requires the approval of the Lead Agencies (CSLC or MBNMS) must allow for adequate review time. When a mitigation measure requires that a mitigation program be developed during the design phase of the Project, the Applicant must submit the final program to CSLC and MBNMS for review and approval before construction begins. Other involved agencies and jurisdictions may require additional review time. It is the responsibility of the assigned environmental monitor assigned to ensure that appropriate agency reviews and approvals are obtained.

The CSLC, MBNMS, or their designee will also ensure that any deviation from the procedures identified under the monitoring program is approved by the CSLC and MBNMS. Any deviation and its correction shall be reported immediately to the CSLC, MBNMS, or their designee by the assigned environmental monitor.

6.2 ENFORCEMENT RESPONSIBILITY

The CSLC and MBNMS are responsible for enforcing the procedures adopted for monitoring through the environmental monitor assigned to project construction. Any assigned environmental monitor shall note problems with monitoring, notify appropriate agencies or individuals about any problems, and report the problems to the CSLC and MBNMS or their designee.

6.3 MITIGATION COMPLIANCE RESPONSIBILITY

The Applicant is responsible for successfully implementing all the mitigation measures in the MMP, and is responsible for assuring that these requirements are met by all of its construction contractors and field personnel. Standards for successful mitigation also are implicit in many mitigation measures that include such requirements as obtaining permits or avoiding a specific impact entirely. Other mitigation measures include detailed success criteria. Additional mitigation success thresholds will be established by applicable agencies with jurisdiction through the permit process and through the review and approval of specific plans for the implementation of mitigation measures.

6.4 GENERAL MONITORING PROCEDURES

Environmental Monitors. Most of the monitoring procedures will be conducted during the construction phase of the Project. The CSLC, MBNMS, and the environmental monitor(s) are responsible for integrating the mitigation monitoring procedures into the construction process in coordination with the Applicant. To oversee the monitoring procedures and to ensure success, the assigned environmental monitor must be on site during that portion of construction that has the potential to create a significant environmental impact or other impact for which mitigation is required. The environmental monitor is responsible for ensuring that all procedures specified in the monitoring program are followed.

Construction Personnel. A key feature contributing to the success of mitigation monitoring will be obtaining the full cooperation of construction personnel and supervisors. Many of the mitigation measures require action on the part of the construction supervisors or crews for successful implementation. To ensure success, the following actions, detailed in specific mitigation measures, will be taken:

- Procedures to be followed by construction companies hired to do the work will be written into contracts between the Applicant and any construction contractors. Procedures to be followed by construction crews will be written into a separate document that all construction personnel will be asked to sign, denoting agreement.
- One or more preconstruction meetings will be held to inform all and train construction personnel about the requirements of the monitoring program.
- A written summary of mitigation monitoring procedures will be provided to construction supervisors for all mitigation measures requiring their attention.

General Reporting Procedures. Site visits and specified monitoring procedures performed by other individuals will be reported to the environmental monitor assigned to project construction. A monitoring record form will be submitted to the environmental monitor by the individual conducting the visit or procedure so that details of the visit can be recorded and progress tracked by the environmental monitor. A checklist will be developed and maintained by the environmental monitor to track all procedures required for each mitigation measure and to ensure that the timing specified for the procedures is adhered to. The environmental monitor will note any problems that may occur and take appropriate action to rectify the problems.

Evaluation of Effectiveness of Mitigation. After implementation, the effectiveness of each mitigation measure in reducing or avoiding the intended impact will be evaluated. This evaluation will be performed by the environmental monitor based on the monitoring records, field observations, and other available evidence. This evaluation will be submitted to the Lead Agencies along with recommendations for improving the effectiveness of mitigation measures or monitoring and reporting procedures.

Public Access to Records. The public is allowed access to records and reports used to track the monitoring program. Monitoring records and reports will be made available for public inspection by the CSLC or its designee on request.

6.5 MITIGATION MONITORING TABLE

The following section presents the mitigation monitoring tables for each environmental discipline. Two tables are presented on the following pages. Table 6.5-1 provides monitoring information for the mitigation measures proposed in this EIR/EIS to reduce or avoid potentially significant impacts identified in Sections 4.1 through 4.9. Table 6.5.2 provides monitoring information for the protective measures that have been incorporated into the Project by the Applicant and are listed in Section 2.4.

Tables 6.5-1 and 6.5-2 provide the following information, by column:

- Impact (impact number, title, and impact class) or Resource Area (for the Applicant's protective measures);
- Mitigation Measure (title only; full text of the measure is presented in Section 4) or Applicant-Proposed Protective Measure (full text presented in Section 2.4);
- Location (where the impact occurs and the measure should be applied);
- Monitoring/reporting action (action to be taken by the monitor or Lead Agency);
- Effectiveness criteria (how the agency can know if the measure is effective);
- Agency responsible for monitoring; and
- Timing (prior to permit approval; before, during, or after construction; during operation, etc.).

Table 6.5-1. Mitigation Monitoring Program

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
Air Quality						
AQ-1: Vessels used for construction and decommissioning could exceed daily emission thresholds for ozone precursors and particulate matter.	**MM AQ-1a:** Use low-emission fuel on all diesel-powered vessels and construction equipment.	HDD site.	Construction contractors shall retain receipts of fuel purchases to verify use of CARB on-road diesel fuel.	Use of low-emission fuels verified, thereby reducing NOx exhaust emissions.	CSLC/ MBNMS	During construction.
	MM AQ-1b: Contribute to a NOx off-site emission reduction program.	N/A	MBARI shall fund an off-site emission reduction program identified by the MBUAPCD.	Evidence submitted of funding contribution to an off-site emission reduction program.	CSLC/ MBNMS	Prior to construction.
Cultural Resources						
CR-1: The Project could disturb unknown prehistoric sites that lie along the sea route between the +24.5-mile (39.4-km) and +29.0-mile (46.7-km) marks.	**MM CR-1:** Review existing sub-bottom profiler data and avoid any potential archeologically sensitive areas.	Sea route.	MBARI shall submit archival research results to the CSLC and MBNMS.	Archival research verified as complete and in accordance with professional standards.	CSLC/ MBNMS	Prior to construction.
Marine Vessel Transportation						
MVT-4: Potential cumulatively increased risk of marine vessel conflict during construction	**MM MVT-4:** Schedule proposed Project construction so as to avoid the presence of a cable lay vessel within 1.15 miles (1 nm) of vessels performing borehole construction.	Sea route.	Verify scheduling and locations of cable laying and borehole projects.	Conflicts between marine vessels avoided.	CSLC/ MBNMS	During construction.

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
Noise						
NOI-1: Construction equipment could cause noise levels exceeding the 85 dBA limit of the Monterey County Noise Control Ordinance	**MM NOI-1a:** Muffle, shield, or enclose the HDD activity.	HDD site.	Measure noise level at 50 feet with County-approved noise meter.	Noise levels reduced below 85 dBA at 50 feet from the HDD site.	CSLC/ MBNMS	During HDD operations.

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Table 6.5-2. Monitoring Program for Applicant-Proposed Protective Measures

Affected Resource Area	Applicant-Proposed Protective Measures	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
Geology and Soils, Marine Water and Sediment Quality and Oceanography	Place cable as perpendicular to slopes as possible and avoid possible areas of sediment slump or slides.	Sea route.	Review cable route in comparison to seafloor profile prior to cable laying. Review post-lay inspection results.	During post-lay inspection, verify that the cable is laid perpendicular to steep slopes to the maximum extent possible.	CSLC/ MBNMS	Before, during, and after cable installation.
Commercial and Recreational Fisheries	Where cable burial is not possible, use additional cable armoring and notify fishers of locations of exposed cables.	Sea route.	Review plans for cable armoring prior to installation.	Verify that additional armoring is used in all locations where cable is exposed.	CSLC/ MBNMS	Before, during, and after cable installation.
	Provide notice to the Moss Landing Harbor District and work with the District to provide notice of the cable laying operation to vessels that operate out of Moss Landing Harbor.	Sea route.	Verify that the Moss Landing Harbor District received notification.	Review methods used by the Moss Landing Harbor District to notify vessel operators and evaluate the effectiveness of the notification methods.	CSLC/ MBNMS	Before cable installation.
Marine and Near-Coastal Biological Resources	Establish a 500-foot (152-m) minimum safety zone along the proposed cable route to avoid marine mammals.	Sea route.	Confirm that a safety zone has been established and procedures implemented for suspending cable laying if a marine mammal enters the safety zone.	Verify that purpose of the safety zone is understood by the vessel crew and procedures for suspending cable laying are followed.	CSLC/ MBNMS	During cable installation.

Affected Resource Area	Applicant-Proposed Protective Measures	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	Two NOAA Fisheries-approved marine mammal monitors will be on watch on each vessel (cable-lay and support vessels) during cable laying activities to ensure that any marine mammal entering the established (minimum) 500-foot (152-m) safety zone is sighted.	Sea route.	Monitor and report the presence of marine mammals in the safety zone.	Verify that cable laying is suspended when a marine mammal enters the safety zone.	CSLC/ MBNMS	During cable installation.
	Limit cable-laying vessel speed limits to less than 2 knots. Moderate speed of support vessels (3-5 knots) to minimize the likelihood of collisions with marine mammals and sea turtles.	Sea route.	Monitor vessel speed during cable laying operations.	Verify that vessel speed is moderated and collisions with marine mammals and sea turtles are avoided.	CSLC/ MBNMS	During cable installation.
	Reduce or minimize propeller noise (through reduction of vessel speed) and other noises associated with cable laying activities to the extent possible.	Sea route.	Monitor vessel speed during cable laying operations.	Verify that vessel speeds are kept to the minimum to the extent possible during cable laying operations.	CSLC/ MBNMS	During cable installation.
	Minimize the amount of external lighting at night and shield lights downwards in order to minimize marine bird-vessel collisions.	Sea route.	Monitor the amount of external lighting in use during night operations.	Verify that all unnecessary vessel lights are kept off during nighttime cable laying operations.	CSLC/ MBNMS	During cable installation.
Marine Water and Sediment Quality and Oceanography	An approved Spill Prevention Control and Countermeasure Plan will be implemented during all cable laying and operation/maintenance activities.	Sea route.	Confirm approval of the Spill Prevention Control and Countermeasure Plan prior to cable installation. Monitor spill clean-up for compliance with all applicable plan procedures.	Verify that the Spill Prevention Control and Countermeasure Plan is properly implemented in the event of a spill.	CSLC/ MBNMS	During cable installation and operation.

Affected Resource Area	Applicant-Proposed Protective Measures	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	A fast response vessel will be available during installation with an absorbent boom for spill control.	Sea route.	Confirm the availability of the fast response vessel during all cable laying operations and that it is properly equipped with an absorbent boom.	Verify that the fast response vessel is able to quickly respond to a spill and effectively deploy the absorbent boom.	CSLC/ MBNMS	During cable installation.
	Avoid grapnel retrieval near outcrops by consulting charts and relocating repair to soft substrate.	Sea route.	Confirm that grapnel retrieval near outcrops does not proceed until proper charts are consulted.	Verify that outcrops are not damaged by grapnel retrieval.	CSLC/ MBNMS	During cable installation and cable repair operations.
	In the event that a repair in a heavily fished area is necessary, notify fishermen and charter a local fishing vessel to patrol the area to minimize the possibility of interference with fishing operations.	Sea route.	Confirm that notice is provided to fishermen and that a vessel is chartered to patrol the area.	Verify that noticing and patrols are effective in keeping fishing vessels away from the immediate area.	CSLC/ MBNMS	During cable repair operations.
	Place plastic barriers under drilling equipment and oil absorbent blankets around hydraulic components to add protection between the rig and ground surface in order to contain potential spills.	HDD site.	Confirm the placement of barriers and blankets prior to the initiation of drilling.	In the event of a spill, verify that the installed barriers and blankets are effective in containing the spill.	CSLC/ MBNMS	During HDD operations.
	Prior to HDD operations, construction personnel shall attend an environmental training session conducted by the Environmental Monitor.	HDD site.	All HDD construction personnel must provide proof of completion of environmental training.	Verify that procedures and practices emphasized in the training session are followed during HDD.	CSLC/ MBNMS	During HDD operations.

Affected Resource Area	Applicant-Proposed Protective Measures	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	Once all the HDD equipment is in place, place silt fence and hay bales around the work perimeter and around the sump pit and mud system.	HDD site.	Confirm the placement of silt fences and hay bales around the work perimeter, sump pit, and mud system.	Verify that the fencing and hay bales are effective in minimizing erosion.	CSLC/ MBNMS	During HDD operations.
	During the HDD operation, as each joint of pipe is set onto the drill rig, perform a visual inspection to make sure no debris is sent down the pipe that could cause a problem during cable installation.	HDD site.	Verify with HDD personnel that they have conducted visual inspections as each joint of pipe is set onto the drill rig.	If cable installation is hindered, determine whether the hindrance could be a result of debris introduced into the conduit during HDD.	CSLC/ MBNMS	During HDD operations.
	During the HDD operation, constantly monitor the drill path for surface releases and maintain constant communication between the monitoring vessel and the control cab at all times.	HDD site.	The monitors will be kept constantly informed of the progress of the drill head so as to be able to concentrate their search for any indications of an inadvertent release of drilling fluids.	If any inadvertent release of drilling fluid occurs, verify whether monitors were able to identify the release quickly based on the information they were provided on drill head location.	CSLC/ MBNMS	During HDD operations.
	In the event of a subsurface release, divers equipped with specialized water lifts (pumps) and filter bags will remove bentonite from the sea floor.	HDD site.	Monitor for any subsurface releases and confirm the deployment of properly equipped divers.	Interview divers and inspect filter bags to determine the effectiveness of bentonite removal.	CSLC/ MBNMS	During HDD operations.
	In the event of a bentonite release on land, immediately contain the release and transfer the fluid back to the drill site for reuse or into a storage tank and removed from the site.	HDD site.	Monitor the containment and transfer of the bentonite.	Verify that containment procedures are implemented promptly and that bentonite is fully retrieved.	CSLC/ MBNMS	During HDD operations.

Affected Resource Area	Applicant-Proposed Protective Measures	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	Once the HDD operation is complete, return the work area to its original condition or better to the satisfaction of all permitting agencies, public works inspectors, and supervising engineer.	HDD site.	Monitor work site clean up to verify removal of all equipment and materials. Monitor actions to restore the ground surface and vegetation.	Verify that the site is returned to its original condition and that permitting agencies and inspectors are satisfied with the restoration of the site.	CSLC/ MBNMS	During HDD operations.

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